Baltimore and Ohio Railroad: Carrollton Viaduct
Over Gwynn's Falls near Carroll Park
Baltimore City
Maryland

HAER No. MD-9

HAER
MD,
4-BALT,
129-

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

Historic American Engineering Record
National Park Service
Department of the Interior
Washington, D. C. 20240

HAER
MD,
4-BALT,
129-

HISTORIC AMERICAN ENGINEERING RECORD

Baltimore and Ohio Railroad: Carrollton Viaduct

HAER No. MD-9

Location:	Over Gwynn's Falls near Carroll Park Baltimore City, Maryland
Date of Construction:	1828-1829
Designer/Builder:	Casper W. Weaver and James L. Floyd
Original Use:	Railroad viaduct
Present Use:	Railroad viaduct (1970)
Present Owner:	Baltimore & Ohio Railroad
Significance:	Located over Gwynn's Falls near Baltimore, Maryland, the Carrollton Viaduct is the first American stone masonry bridge built for railroad use. It was named after Charles Carroll, the last living signer of the Declaration of Independence, who laid the cornerstone in May 1828. Builder Caspar Weaver and designer James Lloyd completed the structure for the Baltimore & Ohio Railroad in November 1829, at the cost of $58,106.73. The bridge, 312 feet in length, rises from its foundations about 65 feet (51 feet, 9 inches above Gwynn's Falls). It consists of a full-centered arch with a clear span length of 80 feet over the stream, a space for two railroad tracks on its deck. To provide an underpass for a wagon road, an arched passageway, 16 feet in width, was built through one of the masonry-walled approaches. Originally planned as one arch of 40 feet chord, the dimensions were enlarged to quiet the concern of the proprietor of the mills located immediately above the bridge site, who feared that 40 feet would be insufficient if the stream was flooded. The heavy granite blocks which form the arches and exterior walls were procured from Ellicotts Mills and Port Deposit. A temporary wooden framework supporting the central span held 1,500 tons of this stone during construction. A white cornerstone at one end of the bridge bears the inscription "James Lloyd of Maryland, Builder A.D. 1829." Andrew Jackson, the first President of the United States to ride on a railroad train, crossed the bridge on a trip between Ellicotts Mills and Baltimore on June 6, 1833. The Carrollton Viaduct has served the Baltimore & Ohio Railroad for over 150 years.

In his "Histoire et Description des Voies de Communication aux Etats-Unis," 1840-1841, Michel Chevalier, an eminent French engineer, has recorded his observations and investigations of American engineering operations. A translation of his comments relating to the Baltimore & Ohio bridges states:

> "The engineers of the company at the head of which was then Colonel Long, proposed to cross the rivers and their tributaries on wooden bridges; and with the exception of the Monocacy, these are narrow streams and of little importance; but the administration of the railroad desired a more permanent construction. They had already justified the epithet, monumental, with which one had sometimes accompanied the name of Baltimore. Thus the viaduct at Carrollton over the tributary of Grimms Falls, at the entrance of the city, was built deluxe of beautiful granite cut out with great care. It consists of a circular arch 24.27 meters span with lateral arches 6.10 meters span and cost 309,700 francs. For a wooden bridge the cost would not have been one-sixth of this amount."

The status of Carrollton Viaduct among American bridges is unique for three reasons, namely:

1. It is the first American stone masonry bridge built for railroad use.

2. It has been in constant service one hundred and twelve years and in this time has borne the ever-increasing volume and load concentration incident to traffic development from four small passenger cars operating upon a wooden track and drawn over the line by a "common wagon horse" to the giant locomotives and correspondingly heavy trains now operating over it.

3. It is one of the oldest, if not the oldest, railroad bridges now in use in the world.

Transmitted by: Jean P. Yearby, HAER, 1984, from data compiled by Llewellyn Nathaniel Edwards, CE, in 1941.